

To: Bahrman, Sarah[Bahrman.Sarah@epa.gov]; Cannon, Natalie[Cannon.Natalie@epa.gov]
Cc: Kahn, Lisa[Kahn.Lisa@epa.gov]; Bockstahler, Breann[Bockstahler.breann@epa.gov]; Copeland, Michael[Copeland.Michael@epa.gov]; Gindelberger, Jim[Gindelberger.Jim@epa.gov]; Lutherer, Thomas[Lutherer.Thomas@epa.gov]; Morrison, Kendra[Morrison.Kendra@epa.gov]; Mifflin, Tiffany[Mifflin.Tiffany@epa.gov]; Mohr, Mindy[Mohr.Mindy@epa.gov]; Crosby, Jake[Crosby.Jake@epa.gov]; Hailu, Tsegaye[Hailu.Tsegaye@epa.gov]; Le, Kim[Le.Kim@epa.gov]
From: Clement, Robert
Sent: Thur 8/13/2015 4:11:02 PM
Subject: RE: Development of a special long term monitoring plan for Animas River

All,

The data in the raw water is important because it gives levels that are going to challenge the WTPs especially during storm events and spring runoff. Many IOC's are not easily removed by traditional treatment. I'm not talking about duplication of efforts but collaboration by our respective experts to ensure that during storm events the public is not receiving a slug of water with high levels of IOC's. Is there an opportunity to view and comment on CDPHE's DW monitoring plan?

From: Bahrman, Sarah
Sent: Thursday, August 13, 2015 9:45 AM
To: Clement, Robert; Cannon, Natalie
Cc: Kahn, Lisa; Bockstahler, Breann; Copeland, Michael; Gindelberger, Jim; Lutherer, Thomas; Morrison, Kendra; Mifflin, Tiffany; Mohr, Mindy; Crosby, Jake; Hailu, Tsegaye; Le, Kim
Subject: RE: Development of a special long term monitoring plan for Animas River

Bob & all –

Those data were from samples taken directly out of the Animas River. Just want to be sure the communication is clear when comparing to MCLs for finished water.

For DW monitoring, CDPHE has the lead on this and has already discussed their expectations with impacted water systems.

Emergency response has a sampling plan already for river and sediment sampling as well.

With all of that info in place, I don't see a need for us to duplicate any of those efforts.

Thanks,

Sarah

Sarah E. Bahrman | Acting Director, Water Program | U.S. Environmental Protection Agency - Region 8

(p) 303.312.6243 | (c) 303.903.8515 | (f) 877.876.9101

From: Clement, Robert

Sent: Thursday, August 13, 2015 9:16 AM

To: Cannon, Natalie

Cc: Bahrman, Sarah; Kahn, Lisa; Bockstahler, Breann; Copeland, Michael; Gindelberger, Jim; Lutherer, Thomas; Morrison, Kendra; Mifflin, Tiffany; Mohr, Mindy; Crosby, Jake; Hailu, Tsegaye; Le, Kim

Subject: Development of a special long term monitoring plan for Animas River

Natalie and all,

In the Denver Post Tuesday, August 13, 2015, the article titled *arsenic, lead, cadmium broke water limits* reported data at Silverton six hours after the blowout of primary MCLs for cadmium at 98.3 ppb (19.6 times the MCL), beryllium at 34.8 ppb (8.7 times the MCL), lead at 5,720 ppb (initial deluge, 1,144 times the action level), copper at 10,400 ppb (8 times the action level), arsenic 264 ppb (26.4 times the MCL), and for secondary MCLs iron at 326,000 ppb (1,086 times the secondary standard), manganese at 3,040 ppb (60 times the secondary MCL), zinc at 26,800 ppb (5.36 times the secondary MCL) and aluminum at 91,900 ppb (1838 times the secondary MCL).

These numbers are high enough to warrant the development of a special sampling plan with the states that are impacted. This sampling plan should test for the full suite of IOCs and secondary MCLs during the most vulnerable times like storm events, spring runoff, low flows and different flows and compare these results to the average flow rate in the river. This special monitoring plan needs to be a long term plan that continues for

at least a decade or more into the future or when high flows don't create levels over the MCL. The NPDWR monitoring scheme for IOCs is not designed to provide this type of data. This data is important so WTPs know when to close their intake and if the levels are diminishing over time. Although lead and copper are action levels, if a PWS exceeds the AL it triggers source water monitoring and very low levels in the source can trigger the installation of treatment. Please let me know if I can be any assistance in the development of this special monitoring plan.

Bob Clement

Environmental Engineer M.S./Microbiologist

U.S. EPA Region 8 (8P-W-DW)

1595 Wynkoop Street

Denver, Colorado 80202

clement.robert@epa.gov

303-312-6653

1-800-227-8917 ext. 6653